

Claims

[c1] 1. An RF tracking system for determining characteristics of at least one object in a local area, the system comprising:

- (a) at least one remote spread spectrum radio transceiver, the at least one remote spread spectrum radio transceiver being coupled to the at least one object in the local area;
- (b) at least three tower spread spectrum radio transceivers being positioned proximate to the local area and the at least three spread spectrum radio transceivers transmitting signals to and receiving signals from the at least one remote spread spectrum radio transceiver;
- (c) a signal processor coupled to the at least three tower spread spectrum radio transceivers, the signal processor processing signal data received from the at least three tower spread spectrum radio transceivers;
- (d) a database engine in communication with the signal processor, the database engine storing in and retrieving from a database the signal data and biographical data relating to the at least one object; and
- (e) a processor coupled to the database engine, the processor determining the characteristics of the at least one

object based, at least in part, on the signal data and the biographical data.

- [c2] 2. A method for determining characteristics of at least one object in a three-dimensional space, the method comprising:
 - (a) providing at least one remote spread spectrum radio transceivers, the at least one remote spread spectrum radio transceiver being coupled to the at least one object;
 - (b) positioning at least three tower spread spectrum radio transceivers proximate to the three-dimensional space;
 - (c) receiving signal data from the at least one remote spread spectrum radio transceiver with the at least three tower spread spectrum radio transceivers;
 - (d) coupling a signal processor to the at least three tower spread spectrum radio transceivers, the signal processor processing the signal data received from that at least three tower spread spectrum radio transceivers;
 - (e) storing in and retrieving from a database the signal data and biographical data relating to the at least one object; and
 - (f) processing at least the signal data and the biographical data to determine the characteristics of the at least one object.

[c3] 3. A system for monitoring the performance of at least one sports player, animal, or other object on a sporting field or a racetrack for the purpose of enabling derivative-based wagering, the system comprising:

- (a) at least one remote spread spectrum radio transceiver, the at least one remote spread spectrum radio transceiver being positioned on the at least one sports player, animal, or other object;
- (b) at least three tower spread spectrum radio transceivers being positioned proximate to the sports field or racetrack, the at least three tower spread spectrum radio transceivers transmitting signal data to and receiving signal data from the plurality of remote spread spectrum radio transceivers;
- (c) a signal processor coupled to the at least three tower spread spectrum radio transceivers, the signal processor processing signal data received from the at least three tower spread spectrum radio transceivers;
- (d) a database engine in communication with the signal processor, the database engine storing in and retrieving from a database the signal data and biographical data of the at least one sports player, animal, or other object; and
- (e) a processor coupled to the database engine, the processor determining the characteristics of the at least one

sports player, animal, or other object based, at least in part, on the signal data and the biographical data.

- [c4] 4. A computer-based system compatible with spatial tracking technology consistent with that of claim 3, the integrated system comprising capability to process, store, retrieve, interface, and/or present over various media formats spatial tracking measurement data and associated derived data attributes related to athletic physical performance for the purpose of enabling automated extensions to established gaming and wagering applications, specifically including conditional, derivative, and combinational bets.
- [c5] 5. The system of claim 3 further comprising capability to communicate with, or provide an interface to, existing legacy information systems including tote systems, odds/payouts information systems, infield/in-venue scoreboards, simulcast video distribution to in-venue monitors/kiosks and to remote off-track-betting establishments (OTBs).
- [c6] 6. The system of claim 3 further comprising capability to provide various presentations of results thereof, over various media formats including, but not limited to, printed hardcopy, computer-generated hypertext, interactive animations, and/or synchronized graphic overlay

with video.

- [c7] 7. The system of claim 3 further comprising the ability to generate trend analysis, using past and present performance quantification and derivative wagering models as determined by said system and method, to provide simulation results for handicapping purposes to plan and optimize future wagers.
- [c8] 8. The system of claim 3 further comprising the ability to set a user alert or user preference, such that the user can be paged or called back over a wireless communications device, with the live or requested data results formatted and customized for presentation over said device.
- [c9] 9. A method for automating the implementation and tracking of derivative and conditional based wagering by employing spatial tracking measurements as the basis of computer-assisted analysis and presentation of said assessment results.
- [c10] 10. The method of claim 9 further comprising a data storage subsystem, integrated locally and/or accessible remotely over a computer network or via the Internet, so as to facilitate an ability to present comparisons of past performance.
- [c11] 11. The method of claim 9 further comprising a data

storage subsystem, integrated locally and or accessible remotely over a computer network or via the Internet, so as to facilitate the ability to present comparisons of past performance and/or previous derivative wager outcomes related to said system.

- [c12] 12. The method of claim 9 further comprising capability to provide various presentations of results thereof, over various media formats including, but not limited to, printed hardcopy, computer-generated hypertext, interactive animations, and/or synchronized graphic overlay with video.
- [c13] 13. The method of claim 9 further comprising the ability to generate trend analysis, using past and present performance quantification and derivative wagering models as determined by said system and method, to provide simulation results for handicapping purposes to plan and optimize future wagers.
- [c14] 14. The method of claim 9 further comprising the ability to set a user alert or user preference, such that the user can be paged or called back over a wireless communications device, with the live or requested data results formatted and customized for presentation over said device.